



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,565	01/02/2004	Li-Ching Lo	LOLI3003/EM	8780

23364 7590 04/20/2006  
BACON & THOMAS, PLLC  
625 SLATERS LANE  
FOURTH FLOOR  
ALEXANDRIA, VA 22314

EXAMINER

LEITH, PATRICIA A

ART UNIT PAPER NUMBER

1655

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/749,565

Applicant(s)

LO ET AL.

Examiner

Patricia Leith

Art Unit

1655

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2,5-8 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,5-8 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1655

## DETAILED ACTION

Claims 2, 5-8 and 19 are pending in the application and were examined on their merits.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5-8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Du et al. (1995).

Niikawa et al. (1993) evaluated substances which inhibited the mutagenicity of benzo[a]pyrene in bacteria. Amongst several protocols, Niikawa et al. performed methanolic extracts of *Ligustrum licidum* fruits, followed by an ether and *n*-hexane extraction (see 'Materials and Methods' p. 2 and 'Results and discussion', p. 4). It is noted that the *n*-hexane layer was evaporated which is considered a purification step

Art Unit: 1655

because it removes unwanted solvent, thereby further purifying the analyte (see pp. 2-3 'Separation of inhibitory components in methanol extract').

It is newly deemed that purification of the privet via silica gel would have been obvious to one of ordinary skill in the art at the time the invention was made for the following reasons:

Niikawa et al. did not specifically disclose wherein silica gel was used in their purification protocol.

One of ordinary skill in the art would have been motivated to use silica gel in order to further elucidate the endogenous phytochemicals of privet. Silica gel is a well-known chromatography medium which will separate chemicals based upon their polarity. Thus, one of ordinary skill in the art would have been motivated to elucidate the phytochemicals in privet fruit in order to further purify any phytochemical.

Claims 2, 5-8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Du et al. (1995).

Du et al. (1995) disclosed a method for purifying Oleanolic acid from Ligustrum lucidum (aka 'Ligustri Lucidi', aka privet) fruit comprising extraction of L.lucidum fruit by petroleum ether followed by extracting twice each with 1000ml of chloroform for 2 hours,

Art Unit: 1655

evaporated, dissolved in ethanol and evaporated. Thus, Du et al. disclosed a low polarity solvent extract of *L. lucidi* fruit, as well as a purification step following the extraction step (e.g. followed by a ethanol extraction = further purification).

It is newly deemed that purification of the privet via silica gel would have been obvious to one of ordinary skill in the art at the time the invention was made for the following reasons:

Du et al. did not specifically disclose wherein silica gel was used on their HPLC column in order to elucidate the endogenous phytochemicals of the privet extract.

One of ordinary skill in the art would have been motivated to use silica gel on the HPLC in order to elucidate the endogenous phytochemicals of privet. Silica gel is a well-known chromatography medium which will separate chemicals based upon their polarity. Thus, one of ordinary skill in the art would have been motivated to elucidate the phytochemicals in privet fruit in order to further purify any phytochemical.

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

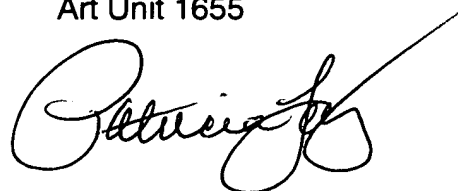
No Claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia Leith whose telephone number is (571) 272-0968. The examiner can normally be reached on Monday - Thursday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terry McKelvey can be reached on (571) 272-0775. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patricia Leith  
Primary Examiner  
Art Unit 1655

A handwritten signature in black ink, appearing to read 'Patricia Leith', with a long, sweeping horizontal line extending to the right.

April 10, 2006